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ABSTRACT

The use of a learning model in a peer tutoring program is discussed. Although the tutorial function is often a priority, the goal of the peer-tutoring program is to help students become independent learners. To eliminate the need for tutoring, it is necessary to determine why the student is having academic problems. To train peer tutors, a paradigm of the learning process is used that is based on a computer model of information processing. This Integrated Learning Model (ILM) has five phases: preparation, input, processing, storage, and output. In an initial training session, tutors are asked to name activities that relate to the learning process. These activities are grouped according to the five main phases of the ILM. In additional training sessions, tutors are provided case notes of students that include diagnostic information. The tutor's task is to determine the possible contributing factors to problem areas. Finally, tutors learn interviewing strategies needed to determine in what phase the student's learning is breaking down. A list of key questions that tutors incorporated into their interviews is included. In addition to explaining the learning phases, the paper identifies the strengths and weaknesses of the ILM. (SW)

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College Reading and Learning Assistance

Technical Report 84-03

Using a Learning Model to Integrate Study Skills Into a Peer-Tutoring Program

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USING A LEARNING MODEL TO INTEGRATE STUDY SKILLS INTO A PEER-TUTORING PROGRAM

A responsibility of the peer-tutor is to offer instructional services to the individual college student with an academic problem. Typically, service is provided in the form of tutorial sessions focusing specifically on the student's immediate needs. Although the tutorial function of peer-tutoring is a necessity and often a priority, the goal of our peer-tutoring is to equip the student with the necessary tools to become an independent learner and trouble-shooter and ultimately dissolve his/her dependency on tutorial instruction. Our peer-tutors, therefore, are more than tutors. They provide another form of academic assistance that may improve the student's chances for long range achievement--study skills.

When a peer-tutor comes in contact with a student, it is generally easy to identify the immediate problem. The student claims he/she is failing a history class, or is unable to write a term paper, or cannot understand algebra. What is not easy to detect, however, is <u>why</u> the student is having the problem. Although it is often much more difficult to determine the answer to this question, it may often be a key factor in eliminating the need for tutorial assistance.

In order for the peer-tutor to more effectively detect the cause of a learning problem, it is necessary that he/she have a basic understanding of the learning process.

One way to foster this understanding is through a model. A paradigm we have developed for training peer-tutors to comprehend the rudiments of learning theory, is the Integrated Learning Model (ILM). This model is based on a computer model of information processing. Certain theorists (Hunt, 1962; Simon & Feigenbaum, 1964) have formalized an elaborate computer analogy for human information processing (HIP) which postulates thought patterns during learning. In reviewing these HIP models we were attracted by their simplicity, logic and face validity, all useful for promoting retention and application. In the development of the ILM we borrowed the main phases of these HIP models, then grouped learning elements around each (See Figure 1). It is important here to note that our model is only similar in design to and not representational of the models developed by HIP theorists.

Insert Figure about here

The ILM consists of five phases: Preparation, Input, Processing, Storage and Output. The first phase in the learning process, Preparation, includes those learning elements that are prerequisite to the actual input of information. In general it concerns itself with the uniqueness of the individual who has certain needs that must be met before the higher level skills of gaining information can be utilized. The second phase, Input, affects the

quality of reading and studying. How well a person inputs is to a high degree dependent upon how well prepared that person is to learn. Processing, the third phase, includes taking into consideration the depth to which the student wants or needs to comprehend the material to be learned. It involves effectively organizing the learning material, understanding the different reading requirements of specific subject areas, applying techniques that can be used to help one become actively involved in learning, and also increasing one's ability to read efficiently. The next phase, Storage, involves remembering this information that has been processed. It deals with techniques for improving memory and retention. The last phase, Output, deals with the skills necessary for demonstrating that learning has taken place.

The purpose of this model is to help the peer-tutor discover in what phase the learning process is breaking down. To illustrate how the model can be used for this purpose, let us consider this example. Suppose a student seeks help from a peer-tutor because he/she is failing history. The student's complaint may be based entirely on failing test grades. It is likely that test failure is symptomatic of a more basic problem. After diagnostic questioning, the peer-tutor might find that the student appears strong in all phases of the learning process but Output. Perhaps inordinate test-anxiety or lack of test-wiseness skills is contributing

to the student's poor test performance. On the other hand, the peer-tutor may find that the student's failure is tied to problems he/she is having with a host of learning elements at every other phase of the learning process: studying in a noisy, busy environment, taking poor lecture notes, possessing limited vocabulary, reading textbooks without a study method, and cramming for tests. The tutor's sensitivity to the integrated nature of learning can translate into treatments that are more effective than tutorial patchwork. Endowed with an arsenal of good study skills, our student may go on to improve in and pass not only history but all of his/her courses.

Training Tutors to Use the Model

In order to show our peer-tutors how to use the ILM, we conduct an initial formal training session of about 45 minutes in length in which peer-tutors are asked to name all of the activities they can think of related to the learning process. Emphasis is placed on observable activities they, or people they know engage in which aid learning. Once this list is written on the board--and often supplemented by ideas from the trainer--the activities are grouped according to the five main phases of the ILM. Discussion ensues which serves to bring out the integrated nature of learning as represented in the model.

In subsequent training sessions peer-tutors are given sample case notes of students which include diagnostic information of their strengths and weaknesses. The tutor's

task is to determine the possible contributing factors to problem areas. One case often used in this exercise centers around a student who is skillful in the learning elements of the first three phases of the ILM but for whom learning is breaking down in the Storage and Output phases. With help from the trainer, peer-tutors inevitably discover that although this sample student is highly knowledgeable of good time management techniques, she is unable to apply this knowledge when it comes to preparing for examinations, which in turn results in poor test performance. The goal of these exercises is to lead the peer-tutor to see that although each phase of the model is to be viewed on a continuum (with the preceding phase promoting the following phase), mastery of the previous phase does not guarantee success in the later phases but typically, and logically, contribute to their success. In this way, it can be seen how the different phases of the model are integrated but at the same time are independent of each other.

Two subsequent 45-minute training sessions are spent on developing the peer-tutor's interviewing strategies. The interview is an essential tool that the peer-tutor uses for determining in what phase learning is breaking down for a given individual. One way for the peer-tutor to uncover this information is by asking the student key diagnostic questions based on the learning elements of the ILM. The answers to the questions indicate where the primary problem might be located. The peer-tutor is then able to focus

instruction on the deficiency phase(s).

In the first session, the training involves having the peer-tutors brainstorm all the possible questions that could be asked of a student relative to the learning elements of the ILM. Below are some key questions our peer-tutors incorporated into their interviews as a result of this training to help locate the student's primary problem. It should be recognized that the list is not exhaustive but serves as an example of the kinds of questions that could be asked relative to each learning phase.

Preparation

1. Are you getting enough sleep?
2. Do you have good eating habits?
3. Do you get enough physical exercise?
4. Do you have any physical impairments (poor vision, hearing, etc.)?
5. Do you know how you learn best (learning style)?
6. What kind of study environment do you have?
7. Do you find that you do not have enough time to complete assignments?

Input

1. Do you determine your purpose before reading?
2. Do you come across words that you do not understand or cannot pronounce?
3. Do you have a difficult time understanding graphs or charts?
4. Do you have difficulty with reference materials in the library?
5. Does your mind tend to wander while listening to a lecture?
6. What kind of notetaking system do you have?

Processing

1. Can you detect main points in a lecture and main ideas in textbook reading?
2. Can you put things into your own words after reading or after hearing a lecture?
3. Do you use a study reading technique (PREP, SQ3R) when reading textbooks?
4. Do you adjust your reading style to match your purpose?

Storage

1. Do you review regularly rather than just before tests?
2. Do you have trouble remembering important dates, names, or concepts?
3. Do you have a system for preparing for exams?
4. Do you use mneumonics and other memory devices when appropriate?

Output

1. Are you familiar with basic test-wiseness clues?
2. Do you get extremely nervous and tense during exams?
3. Do you make a point beforehand of finding out what type of exam you will be taking?
4. Do you pace yourself when taking an exam?
5. Do you have trouble with written expression?

The second training session on interviewing techniques is concentrated on helping the peer-tutor to ask appropriate "open-ended" questions. The above questions are basically closed-ended and, therefore, restrict the amount of quality of information to be obtained from a student. Peer-tutors should be shown how to convert them to open-ended queries. For example, the question "Are you getting enough sleep?" could be restated as "Tell me about your sleeping habits." Or "What kind of notetaking system do you have?" could become "How do you take notes?" In this way, as much information as possible about the student is gained in the diagnostic interview.

Simulations of prototypical peer-tutoring interviews are provided with the pre-planned student problems. Peer-tutors are given the opportunity to be both interviewer and interviewee.

Follow-up staffing sessions take place in which

actual clients are discussed and suggestions given for interventions which further operationalize the model.

Finally, to help our peer-tutors appreciate more fully how the ILM can be used with students, we require them to become thoroughly familiar with the application of the model in their own reading and study.

Strengths and Weaknesses of the ILM

We have found that the ILM is inherently viable for the type of training described above. This model is especially useful because of its inherent simplicity and because many of our tutors are already familiar with the linear computer paradigm through their previous course work or experience with micro-computers. The ILM delineates the process of learning in an observable manner. This helps the peer-tutor define more clearly his/her own limitations and range of expertise thereby avoiding, to some extent, the peer-tutor dealing with issues he/she is not capable of handling and allowing these more complex problems to be dealt with by professionals.

One of the weaknesses of the model lies in its simplicity. Some of our peer-tutors in practice tend to think that the model is all inclusive of everything there is to know about learning. Therefore, it is important to reinforce the idea that learning is more complex. Even if the model is valid for a student's problems, the interaction between various aspects of it are complex and sometimes

difficult, if not impossible, for the non-professional to discern. For example, it is not unusual for some of our peer-tutors to assume that they have uncovered the reason for a student's failure to learn when they find out a student may not be very good at taking notes yet totally miss the fact that the student is a very poor reader or is failing because of emotional problems. The model is deceptive in its simplicity and peer-tutors are often reminded of this.

In monthly reviews of our peer-tutors' own student case notes, we have found that although tutoring sessions last longer, they become more interactive and it appears that more learning does take place. We have noted that before utilizing this model peer-tutor sessions usually lasted one or two times. Since we began utilizing this model sessions average approximately four 30 to 50 minute sessions. In our discussion with the tutors our subjective experiences are that the tutors and clients are able to see a problem far more wholistically. For example,the client and tutor come to recognize that there is more to success in algebra than how to do a particular problem. Rather, success in a course requires the application of good reading and study skills.

With the ILM as a guide and the ability to ask appropriate questions, the peer-tutor is able to look beyond the symptom and address the student's primary problem. This approach has proven helpful to students because it provides them with skills for solving their own problems outside of

the tutorial environment. Although we cannot provide empiricial evidence at this time, it appears from our subjective analysis that as proper instruction is given, the student becomes less dependent on the peer-tutor and more dependent on his/her own ability to learn. We say this because of the nature of the changed tutorial environment. It has moved from one of explanation of "how to", solve a problem, or "this is what the concept is" to, how to uncover the solution by oneself. This we feel has been one of the more significant developments since we started using the model.

References

Aiken, E., Thomas, G., & Shennum, W. (1975). Memory for a lecture: Effects of notes, lecture rate, and informational density. Journal of Educational Psychology, 67(3), 439-444.

Annis, L., & Davis, J. (1978). The effect of study techniques and preferences on later recall. Journal of Educational Research, 71, 175-178.

Ardhanareeswaran, B. (1977). Reference skills and education for development. Journal of Reading, 20(8), 674-676.

Barnett, J., DiVesta, F., & Rogozinski, J. (1981). What is learned in notetaking? Journal of Educational Psychology, 73, 181-192.

Barton, W., Jr. (1930). Outlining as a study procedure. New York: Columbia University, Teacher's College, Bureau of Publications.

Braam, L. (1963). Developing and measuring flexibility in reading. The Reading Teacher, 16, 247-254.

Champlin, S., & Karoly, P. (1975). The role of contract negotiation in self-management of study time: A preliminary investigation. Psychological Reports, 37, 724-726.

Davis, F. (1944). Fundamental factors of comprehension in reading. Psychometrika, 9, 195-197.

Davis, F. (1968). Research in comprehension reading. Reading Research Quarterly, 3, 499-545.

DiVesta, F., & Gray, S. (1975). Listening and notetaking. Journal of Educational Psychology, 63, 8-14.

Flavell, J., & Wellman, H. (1975). Metamememory. Bethesda, MD: National Institute of Child Health and Human Development.

Hunt, E. B. (1962). Concept learning. New York: Wiley.

Irwin, J. (1981). Synthesizing comprehension research in an interactive componential analysis. Reading Psychology, 2, 173-182.

Kirby, A. (1978). An analysis of the effects of instruction on college study time management. Digest of Audiovisual Instruction, 38(11), 537.

Kirkland, K., & Hollandsworth, J. (1979). Test anxiety, study skills, and academic performance. Journal of College Student Personnel, 20, 421-435.

Millott, R., & Cranney, A. (1976). Personality correlates of college reading-study skills. Journal of Reading Behavior, 8(3), 335-336.

Mount, M., & Tirrell, F. (1977). Improving examination scores through self-monitoring. Journal of Educational Research, 71(2), 70-73.

Petrosky, A. (1982). From story to essay: Reading and writing. College Composition and Communication, 33, 19-36.

Rankin, E. (1970-1971). How flexibly do we read? Journal of Reading Behavior, 3, 24-38.

Robyak, J., & Patton, M. (1977). The effectiveness of a study skills course for students of different personality types. Journal of Counseling Psychology, 24, 200-206.

Samuels, S., & Dahl, P. (1975). Establishing appropriate purpose for reading and its effect on flexibility of reading rate. Journal of Educational Psychology, 67, 38-43.

Sandford, H. (1980). Directed and free search of the school atlas map. The Cartographic Journal, 71, 83-92.

Schmelzer, R. (1975). The effect of college student constructed questions on the comprehension of a passage of expository prose. Unpublished doctoral dissertation, University of Minnesota.

Shaughnessy, M. (1977). Errors and expectations: A guide to the teacher of basic writing. New York: Oxford University Press.

Simon, H. A., & Feigenbaum, E. A. (1964). An information-processing theory of some effects of similarity, familiarization, and meaningfulness on verbal learning. Journal of Verbal Learning and Verbal Behavior, 3, 385-396.

Sticht, T. (1974). Auding and reading: A developmental model. Alexandria, VA: Human Resources Research Organization.

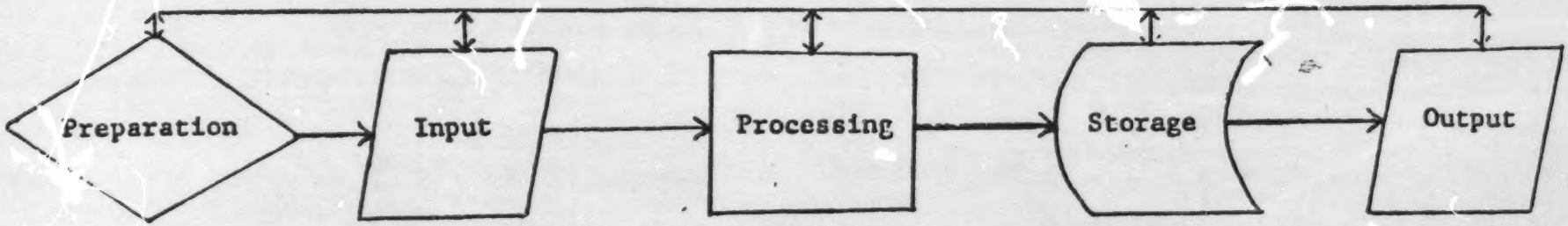
Tinker, M. (1947). Illumination standards for effective and easy seeing. Psychological Bulletin, 44, 235-250.

Tollefson, N. (1979). Study behavior and academic achievement. Resources in Education.

Webber, M. (1949). Studies of lighting and seeing for the student at home. Illumination Engineering, 44, 255-266.

Weber, R. (1953). Relationship of physical fitness to success in college and to personality. Research Quarterly of the American Association for Health, Physical Education and Research, 24, 471-474.

Integrated Learning Model*



Physiological Needs (Weber, 1953)

Learning Style (Annis & Davis, 1978; Millott & Cranney, 1976; Robyak & Patton, 1977)

Study Environment (Eurich, 1932; Krachenbuehl, 1932; Tinker, 1947; Webber, 1949)

Time Management (Champlin & Karoly, 1975; Kirby, 1978)

Purpose for Reading (Samuels & Dahl, 1975)

Vocabulary (Anderson & Freedbody, 1981; Davis, 1944, 1968)

Graphic Materials (Sandford, 1980)

Listening (Sticht, 1974)

Notetaking (Aiken, Thomas & Shernum, 1975; Barnett, DiVesta & Rogozinski, 1981; DiVesta & Gray, 1972)

Reference Skills (Ardhanareeswaran, 1977)

Levels of Understanding (Irwin, 1981)

Study Reading (Barton, 1930; Robinson, 1970)

Reading Flexibility (Braam, 1963; McDonald, 1965; Rankin, 1971)

Student Self-Generated Questions (Schmelzer, 1975)

Memory Technique (Flavell & Wellman, 1976)

Preparing for Exams (Tollefson, 1979)

Writing Skil (Petrosky, 1982; Shaughnessy, 1977)

Exam Skills (Kirkland & Hollandswort 1979; Mount & Tirrell, 197

*This is only a partial listing of relevant research.

Master List
College Reading and Learning Assistance Technical Reports
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Technical Report No.	
84-01	Brozo, W. G., Schmelzer, R. V., & Spires, N. A. A Study of Test-Wiseness Clues in College/University Teacher-Made Tests with Implications for Academic Assistance Centers. (ERIC Document Reproduction Service No. ED 240-928)
84-02	Stahl, N. A., Brozo, W. G., & Henk, W. A. Evaluative Criteria for College Reading-Study Research. (ERIC Document Reproduction Service No. ED 240-933)
84-03	Schmelzer, R. V., Brozo, W. G., & Stahl, N. A. Using a Learning Model to Integrate Study Skills into a Peer-Tutoring Program. (ERIC Document Reproduction Service No. pending)
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84-09 Henk, W. A., Stahl, N. A., & King, J. R. The Readability of State Drivers' Manual. (Not submitted to ERIC--please refer to Transportation Quarterly, 38(4), 507-520.

84-10 Stahl, N. A., Henk, W. A., & King, J. R. Are Drivers' Manuals Right for Reluctant Readers? (ERIC Document Reproduction Service No. ED 245-208)

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